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NIFONG, DEBORAH H. Frequency of Use of Specific Expanded Role Skills by Maternal-Gynecological Nurse Practitioner Program Graduates. (1977) Directed by: Beverly D. Hansen. Pp. 88

The purpose of this study was to elicit the current frequency of use of specific expanded role skills in clinical practice by graduates of one maternal-gynecological nurse practitioner program offered Fall, 1974, Fall, 1975, and Spring, 1976, at a university in the Southeastern United States. Unless the actual subsequent use of skills taught in expanded role programs is validated, then the value and existence of such programs must be questioned.

The subjects were 19 currently practicing registered nurses who had completed a maternal-gynecological nurse practitioner program at a university in the Southeastern United States. The subjects were asked by mailed questionnaire how frequently they used specific expanded role skills taught in this nurse practitioner program. Although the sample population consisted of only 19 subjects, it must be recognized that only 25 nurses had completed this nurse practitioner program. Thus it was likely that the findings of this study were representative of the entire target population for this study.

The data were collected using portions of a University of Vermont Medical Center questionnaire designed to elicit frequency of use of specific expanded role skills. Data

analysis was done in terms of the total number and percent of subjects responding to each question.

The results of this study indicated that all nurses in the sample used on a daily basis some of the expanded role skills taught in the maternal-gynecological nurse practitioner program. The skills used most frequently were those related to history taking, interviewing, interval physical exam, and environmental assessment. The skills used least frequently were those related to complete physical exam and independent functioning according to a protocol. The latter included the prescription of medications for an acute condition, diagnosis and initiation of care for an acute condition, and the adjustment of medications for a chronic condition according to a protocol.

FREQUENCY OF USE OF SPECIFIC
EXPANDED ROLE SKILLS BY
MATERNAL-GYNECOLOGICAL
NURSE PRACTITIONER
PROGRAM GRADUATES

by

Deborah H. Nifong

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Approved by

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APPROVAL PAGE

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CHAPTER I

INTRODUCTION

Stimulated by the realization that there is a manpower shortage in the present health care delivery system (Garfield, 1970; Leininger, 1973), one new approach to patient care is the expanded role of the nurse. The expanded role allows the nurse to perform functions predominantly in the areas of ambulatory adult and child care which have been previously performed only by physicians. (Bates, 1970) After advanced training and experience in interviewing, physical examination, and the biological and psychosocial health and disease factors, the nurse is prepared to monitor the condition of the patient, to manage particular deviations from normal, to institute preventive measures, and to provide emotional support. (Bates, 1970)

One objective of the expanded role is maximum utilization of existing physician resources. By working together, the physician and the nurse may be able to see more patients and to provide more comprehensive care than either could alone. (Bates, 1970)

Since 1965 various programs have been developed for the purpose of preparing nurses for practice in expanded roles. These programs vary in length from several weeks to one academic year. Each program sets its own standards regarding

theory and clinical practice, and each program must be evaluated individually in terms of effectiveness of teaching methods and significance of course content. Programs may have any one of several specific foci (e.g., pediatric, maternity, geriatric) or may be simply general expanded role programs.

A review of literature related to expanded role programs revealed that very few programs published any program evaluation in terms of the subsequent use of expanded role skills by program graduates. "There are few reports of evaluative studies of either individual programs or of groups of practitioners" (Weston, 1975, p. 152). Studies have been concerned with: (1) physician and patient acceptance of the nurse in the expanded role, (2) comparison of medical care by the nurse with medical care by the physician, or (3) individual descriptions of nurse practitioners in practice settings. (Weston, 1975)

Since Fall, 1974, one maternal-gynecological nurse practitioner program has been conducted three times at a baccalaureate school of nursing in the Southeastern United States. A total of 25 registered nurses have completed this expanded role program. The program was financed by the Department of Health, Education, and Welfare (DHEW) and was offered through the Office of Continuing Education in the university school of nursing.

No evidence had been secured by this researcher which would indicate that a follow-up evaluation of this program had been conducted. Specifically, no determination had been made as to the graduates' subsequent use of specific expanded role skills taught in this nurse practitioner program.

Statement of the Problem

This study is concerned with the frequency with which graduates of one maternal-gynecological nurse practitioner program currently use specific expanded role skills in clinical practice.

Definition of Terms

Specific expanded role skills:

- (1) history-taking - obtaining complete health histories from patients
- (2) assessments - performing physical examinations
- (3) evaluation - critical appraisal of health histories, physical exam findings and community resources
- (4) plan of care - formulation of plan of care and initiation of treatment for acutely and/or chronically ill patients

Within the context of this paper the terms "expanded role" and "extended role" are used interchangeably unless otherwise noted.

Clinical practice: any setting of current nursing practice (e.g., public health, hospital, private or group office practice)

Graduate: a registered nurse who has completed successfully the maternal-gynecological nurse practitioner program

Maternal-gynecological nurse practitioner program: the one-semester expanded role program by this name which has been offered three times at a university in the Southeastern United States since Fall, 1974 (see Appendix A for course outline)

Assumptions

1. Registered nurses are capable of performing specific expanded role skills in clinical practice.

2. Registered nurses who successfully completed the maternal-gynecological nurse practitioner program demonstrated at least minimal ability to perform specific expanded role skills.

3. All topics in the maternal-gynecological nurse practitioner program outline were taught to participants in the program.

4. Registered nurses are aware of and will report frequency of use of specific expanded role skills when this information is elicited by a tool developed to collect this information.

Limitations of the Study

Application of the findings of this study was limited to one geographic area and to participants in one maternal-gynecological nurse practitioner program offered in Fall, 1974, Fall, 1975, and Spring, 1976. Since no attempt was made to control whether the practice setting of the registered nurse required or permitted the use of some or all of the specific expanded role skills, this was a limitation of this study.

Purpose of the Study

The purpose of this study was to elicit the current frequency of use of specific expanded role skills in clinical practice by graduates of one maternal-gynecological nurse practitioner program offered Fall, 1974, Fall, 1975, and Spring, 1976, at a university in the Southeastern United States. Unless the actual subsequent use of skills taught in expanded role programs is validated, then the value and existence of such programs must be questioned.

Justification

Conley (1973) suggested that a dichotomy might exist between the expectations of the educational program from which the graduate nurse comes and the expectations of the practice setting to which she goes. Kramer (1974) supported this suggestion and labeled the dichotomy "reality shock".

Similar dynamics might also occur in the nurse who completes an expanded role program. Regardless of what the

nurse is taught in the educational program, the work setting in which the nurse practices determines, to a great extent, what functions the nurse's role actually includes.

In any continuing education program evaluation should be ongoing. Evaluation should be continuous and done in terms of stated philosophy, purpose, and objectives. (McGriff, 1973)

This study has value to nursing in that nursing is undergoing changes in response to health needs of society. (Murphy, 1970)

Currently, nurses are under tremendous pressure from... society... to assume an expanded role in helping physicians carry out medical practice. ...There are a growing number of programs being launched in which nurses are given short courses in how to take medical histories and perform physical examination (Smith, 1970, p. 393).

Review of literature concerning post-course evaluation of expanded role programs revealed that there is no published research on post-expanded role course evaluation of participants' use of expanded role skills. As a registered nurse who has completed recently a certificate-granting Family Nurse Practitioner (FNP) Program, this researcher believes that assessment of the subsequent use of certain expanded role skills by graduates of expanded role programs could guide future decisions to alter, eliminate, or continue such expanded role programs. Unless the actual subsequent use of skills taught in expanded role programs is

validated, then the value and existence of such programs must be questioned.

CHAPTER II

THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

The Expanded Role of the Nurse

Changes in the role of the nurse have occurred rapidly in the past decade. These changes have occurred as a result of the vast expansion of biomedical knowledge and reflect attempts by nursing "to become more responsive to the health needs of our society" (Murphy, 1970, p. 380).

The role of the nurse has changed or expanded due to pressures both within and without the nursing profession. (Smith, 1970) Within the profession, nurses constantly struggle to achieve greater professionalism. Often verbal and managerial skills are valued more highly than activities involved in direct patient care. Vague words are used often to describe the role of the nurse and may reflect "nursing's insecurity and lack of clarity about its role" (Smith, 1970, p. 394).

Pressure to change from without the nursing profession has come from two major sources: society and other professional groups. "Society values expertness" (Smith, 1970, p. 394). Nurses have de-emphasized their actual knowledge and skills by emphasizing their role as facilitator and coordinator. Hospitals reward the nurse who is willing to work extra shifts, to follow physicians' orders without

question, and to abide by hospital routine. Usually no reward is provided for clinical competence. (Kramer, 1974; Smith, 1970)

"Currently nurses are under tremendous pressure from physicians and, in fact, from society to assume an expanded role in helping physicians carry out medical practice" (Smith, 1970, p. 393). Many programs exist which offer short courses to nurses in obtaining medical histories and performing physical examinations. While nurses seek to clarify their role, they eagerly assume responsibilities for tasks such as interpreting EKG's and initiating IV therapy, which formerly were assigned to other professional groups.

Murphy (1970) discussed the change in the role of the nurse in terms of two concepts: "role extension" and "role expansion". Murphy carefully distinguished these two concepts in several respects. "Role extension" is defined as a "unilateral lengthening process" by which the nurse assumes more aspects of functions which she is already performing (Murphy, 1970, p. 383). In essence, the nurse is filling gaps perceived in the health care system. Learning involved in "role extension" usually is accomplished "on the job" with the physician as the authority base. "Role extension" overlooks nurses' unique potential to give care and focuses on cure. (Murphy, 1970)

"Role expansion" is defined as a "diffusion or multidirectional change" for the purpose of not only filling

perceived gaps but also of projecting "new components or systems of health care" (Murphy, 1970, p. 384). Knowledge for this "expansion" process is obtained in a university setting, and the "authority base from which the expanded role emanates is the theoretical and clinical knowledge that incorporates a broad spectrum of health care needs" (Murphy, 1970, p. 384). In this role the nurse might have responsibility for performing physical examination, but she is responsible also for performing primary care of certain patients, nursing assessments and plans, and self-evaluation of efficacy.

As there is no precise, established definition for nursing, a uniform definition of the expanded role of the nurse has not been established. Ford (1971) proposed that the expanded role of the nurse "is a blend of expressive and instrumental components that can provide ways of meeting the 'here and now' and future needs of people" (Ford, 1971, p. 33). Nuckolls suggested that the expanded role of the nurse "should mean integrating some medical functions with improved nursing skills in the interest of the patient" (Nuckolls, 1974, p. 631).

In the publication, A Report of the Secretary's Committee to Study Extended Roles for Nurses, the United States Department of Health, Education, and Welfare (DHEW) has examined the ways in which nurses "can expand and extend the range of their participation in the delivery of health

services" (U.S. DHEW, 1971). DHEW apparently used the words "expanded" and "extended" interchangeably. This investigation concluded that a "definitive statement on the nature and scope of extended roles for nurses... may not even be possible" (U.S. DHEW, 1971, p.8).

The DHEW Committee did attempt to delineate elements of nursing practice in primary, acute, and long-term care. The Committee further listed functions in each of these three areas for which nurses now (1) assume primary responsibility, (2) share responsibility with physicians, and (3) are now prepared and others could be prepared. (U.S. DHEW, 1971)

Finally, nursing educators group future expanded functions of the nurse into five categories: (1) data gathering, (2) nursing diagnosis, (3) nursing intervention, (4) evaluation, and (5) administration. Educators predict that in the future the greatest number of nurses will be evaluating self, others, and community. The point is made that educators also need to focus on the functions of nursing now and in the future. (Torres, 1974)

Expanded Role of the Nurse: Historical Perspective

Traditionally nurses and physicians have worked together in varied degrees of dependence in an attempt to deliver high quality patient care. The roles of these two professionals have been affected constantly by societal factors such as advanced technology, availability

of health workers, and individual personalities. The rapid expansion of biomedical knowledge has produced strain in the relationship of "professional equilibrium" between the nurse and the physician (U.S. DHEW, 1976, p. 1). Some nurses have reacted to this strain by changing or expanding their roles in practice.

The role of the nurse has been changed or expanded in the past decade to allow the nurse to assume greater responsibility for patient care. This change has occurred in view of the fact that the role of the nurse now includes very complex tasks as well as more simple ones and decision making based on a sound knowledge base. (U.S. DHEW, 1976)

Various experiments with the expanded role of the nurse have been occurring for several years. Clinical nurse specialists have been prepared at the graduate level in nursing. Nurse-midwives provide expanded role service to patients, as do pediatric and family nurse practitioners. (U.S. DHEW, 1976)

The first expanded role program in the form of a "nurse practitioner" program was organized in 1965 at the University of Colorado. Upon successful completion of this program, registered nurses were prepared to perform selected functions previously performed only by pediatricians. (Ford, 1971) Subsequent evaluation of this program demonstrated that the nurses

were highly competent in assessing normal and abnormal findings in children, were capable of caring for the majority of children they saw, and were well-accepted by parents, children, and pediatricians (U.S. DHEW, 1976, p. 1).

Concurrently with the organization of the first expanded role program, nurses were utilized and studied as primary care providers to adult out-patients at the University of Kansas Medical Center. In this study, nurses' management of patients with chronic illnesses was compared with physicians' management of this type of patient. Results indicated patient acceptance of and preference for the nurse as provider of such services. The cost of care provided by the nurse was lower than the cost of care provided by the physician. (U.S. DHEW, 1976)

In 1970, the expanded role of the nurse gained the support of the American Medical Association (AMA). In a 1970 Position Statement prepared by its Committee on Nursing, the AMA specified the following objective: "The AMA recognizes the need for and will facilitate the expansion of the role of the nurse in providing patient care" (American Medical Association, 1970, p. 1881).

Following the first expanded role program, the development of many other types of nurse practitioner programs occurred. As of 1973-74, DHEW indicated the existence of the following types and numbers of expanded role programs in the United States:

<u>Type</u>	<u>Number</u>
Pediatric Nurse Practitioner	26
Family Nurse Practitioner	13
Obstetrical/Gynecological Practitioner	1
Medical Nurse Practitioner	1
School Nurse Practitioner	1
Primary Care Nurse Practitioner	2
Family Planning Nurse Practitioner	1
Adult Health Practitioner	1
Family Health Practitioner	1
Ophthalmic Nursing Practitioner	1
Nurse-Midwife	8
Other	28
<hr/>	
Total Expanded Role Programs	84

(U.S. DHEW Publ. No. (NIH) 74-31, 1974)

In his Health Message of 1971, President Nixon "highlighted the significant contribution that specialized nurse practitioners could make in extending health services" (U.S. DHEW Publ. No. 75-41, 1974, p. 33). In November, 1971, the report to the Secretary of DHEW by the Committee to Study Extended Roles for Nurses published conclusions and recommendations in the following areas of nursing: education, legal consideration, interprofessional (nurse/physician) relationships, and extended roles of nurses in primary, acute, and long-term care. This publication listed

functions for which nurses were then responsible, functions shared by nurses and physicians, and functions which some nurses already were and others could be prepared to perform. (U.S. DHEW, 1971)

In the nation's fiscal 1972 budget, funds were allotted for the preparation of nurse practitioners in specialty areas. As a result of this funding, the Division of Nursing of the DHEW awarded 32 three-year contracts for such practitioner programs to hospitals and universities in the United States. These programs for registered nurses were offered to nurses from diploma, associate, or baccalaureate programs and ranged in length from 16 weeks to one academic year. It is estimated that 2400 registered nurses will have received advanced training through these programs by 1977. (U.S. DHEW Publ. No. (HRA) 75-41, 1974)

Support for the expanded role has been expressed by national nursing and medical associations. Guidelines for short-term or continuing education programs to prepare nurses for practitioner roles have been developed by joint medical and nursing efforts. (U.S. DHEW, 1976) North Carolina became one of the first five states to pass acts to allow for and to regulate the expanded practice of nurses. (American Nurses' Association, 1974)

The Division of Nursing (DHEW) has supported numerous projects which are concerned with various aspects of the specialized nurse practitioner roles. Such projects are developed under the concept that nursing care

of patients who are not acutely ill will move into community settings. More and more... nurses will have increased responsibility for the care and teaching of patients, instruction of the population in sound health practices, emphasis on prevention of illness, and coordination of total health care for all people in a community (U.S. DHEW, 1976, p. 2).

Expanded Role Programs

Expanded role programs have been in existence since 1965. (Bullough, 1976; Ford, 1971) As of 1973, 84 programs to prepare nurses for expanded roles were reported to be in operation. (U.S. DHEW. No. (NIH) 74-31, 1974) Many expanded role programs are formal programs organized in a hospital or university setting, as opposed to informal programs of expanded role instruction by individual physicians or group practices. Expanded role programs are usually classified as either "physician's assistant" or "nurse practitioner" programs. Many expanded role programs have received federal funding.

The first physician's assistant (PA) program was started at Duke University in 1965. As of 1976 there were over 50 accredited PA programs in the United States. PA's are allowed to practice in more than 35 states. The PA movement has been important in influencing the development of nurse practitioners: assurance that medical tasks could be delegated led physicians to consider nurses as well-prepared "assistants" (Bullough, 1976, p. 1477).

Post-Course Evaluation of Participant Use of Expanded Role Skills

Regardless of the type of continuing education program, "evaluation should be an on-going process built into the program at the outset" (McGriff, 1973, p. 329). Evaluation should be done in terms of stated philosophy, purposes, and objectives, and should be a continuous part of the program. Some examples of evaluation include: pre and post-program tests, follow-up evaluation after the participants have returned to their work settings, and questionnaires. (McGriff, 1973)

Several authors report evaluations of the work performed by nurses and paramedical personnel functioning in an expanded role capacity. The quality of care delivered by nurse-midwives has been evaluated. (Cohen, 1974) A controlled test of the use of registered nurses for prenatal care has been done. (Schlesinger, Lowery, Glaser, Millions, and Mazumdar, 1973) These studies represent two quantitative evaluations of health workers in expanded obstetrical roles.

Ford (1971) described an evaluation of the Pediatric Nurse Practitioner Program (PNP) at the University of Colorado. This evaluation focused only on the acceptance of the PNP by nurses and physicians.

Ostergard (1974) described the evaluation of performance of paramedical personnel in family planning. Nurses and non-nurses were trained to do physican exams, and the

time which they could save the physician was assessed.

Ostergard, Gunning, and Marshall (1975) reported the training and use of women's health care specialists (nurse and non-nurse participants) in obstetrics and gynecology. These authors evaluated and compared the proficiency of the nurse and non-nurse participants.

Following an in-depth review of the literature and a computer search of medical, psychological, and nursing literature (MEDLINE), this researcher found that there was no published research on post-course (expanded role course) evaluation of participant use of expanded role skills. Telephone discussion with a major coordinator of a Family Nurse Practitioner Program at a large university in North Carolina revealed that an evaluation of that program is currently in progress. One component of this evaluation is reported to be graduates' use of certain expanded role skills taught in this FNP program

One ongoing evaluation of an expanded role program has been developed at a university in Vermont. Since 1974, graduates of the FNP Program at the Vermont university, and a sample of Vermont nurses as controls, have been and continue to be surveyed regarding current nursing functions and attitudes. One area of inquiry of the study is the frequency of use of certain expanded role skills taught in the FNP Program. As this evaluation is an ongoing study, results are incomplete. The purpose of the Vermont study is

to "evaluate how well the FNP Program is succeeding in its attempts to produce nurses who will function in an expanded role" (Vacek, Note 1).

Expanded Role of the Nurse in Maternity Practice

Nurses in expanded roles may practice in many clinical settings. New technology in the care of maternal and newborn patients has created a demand for nurses having a high degree of competence and knowledge in these areas. Historically, women have been used as providers of care to mothers and infants. Such women have been called "midwives" and have been accepted in this role in every country except the United States until very recently. In other countries, midwifery is recognized as a distinct profession and may be closely allied with nursing, as in England and Scotland, or separate and distinct, as in France. (Olsen, 1974)

In the United States, many areas of nursing speciality in maternal and newborn care have evolved recently. Many programs to prepare nurses to function in these specialty areas have been developed. Olsen (1974) discussed the expanded role of the nurse in maternity practice under three major categories: (1) specialty training in limited specific areas, (2) certification of maternity nurses by the American Nurses' Association (ANA) and the Nurses' Association of the American College of Obstetricians and Gynecologists (NAACOG), and (3) midwifery - both lay midwives and certified nurse midwives.

According to Olsen (1974), post graduate programs in maternity care developed for registered nurses in the United States in the 1930's and 1940's. These programs focused on improving skills and supplementing knowledge gained in basic nursing education. No academic credit was awarded upon completion of these programs.

The need for nurses to gain additional knowledge and expertise in various fields of maternity practice has continued to increase. Programs have developed in response to this need in three areas: (1) family planning, (2) neonatal intensive care, and (3) intrapartal care. Programs in these areas range in length from six weeks to one full semester and may offer academic credit. (Olsen, 1974)

Attempts to recognize the advanced knowledge and skills of individual practitioners have resulted in proposed methods of certification for practitioners. Two programs for certification of practitioners, one through ANA and one through NAACOG, are being developed. (Olsen, 1974)

Education Versus Practice

Conley (1973) suggested that the educational program or system from which the graduate nurse comes and the practice setting into which the graduate nurse goes might not always agree as to what skills the nurse should have been taught in school and use in practice. According to Kramer (1974) "reality shock" occurs. The bureaucratic structure of the hospital does not facilitate individual expressions

of professionalism in practice which the graduate nurse has acquired through basic nursing education. The task approaches of the two subcultures, school and work, have very different orientations in the face of which the graduate must begin practice. (Kramer, 1974)

Similar dynamics might also occur in the nurse who undergoes an expanded role program. The educational program prepares the nurse to perform certain expanded role functions and skills. The work setting is perhaps a major determinant as to what functions the nurse's role will include following such a program. (Vacek, Note 1) If indeed there is a discrepancy between what the graduate nurse is taught in the expanded role program and what the work setting permits the nurse to practice, then some resolution of this discrepancy must begin.

Summary of Review of Literature

In view of the facts that (1) nurses are being asked to perform in expanded role capacities, (2) various courses claiming to teach expanded role skills are offered, and (3) ongoing evaluation should be a part of any continuing education program, there is a need to determine the extent to which participants in such courses actually use specific expanded role skills taught in these courses in clinical practice. Demonstration of the use of these skills by these nurses could justify continuation of such formal courses and/or suggest the need to re-examine the content or

teaching methods employed in these courses. These concepts support follow-up evaluation of the use of specific expanded role skills by graduates of expanded role programs.

CHAPTER III

METHODOLOGY

Data Collection Instrument

Prior to the initiation of this study this researcher contacted by telephone one of the authors of an ongoing post-expanded role course evaluation at the University of Vermont Medical Center (UVM). The author of the UVM study provided this researcher with a copy of the results of the UVM study to date and with written permission to use any parts of the questionnaire relevant to the present study. (see Appendix B for written permission)

This researcher met personally with the director of a maternal-gynecological nurse practitioner program at a university in the Southeastern United States. The purpose and methodology of this proposed study were discussed at that time. The director of this program stated that the maternal-gynecological nurse practitioner program had been offered three times to date: Fall, 1974; Fall, 1975; and Spring, 1976. The program director provided this researcher with the names and addresses of all graduates of this program to date. The director further expressed her support for this study and indicated a desire to be informed of the results of the study. The director provided this researcher with the course outline used in the maternal-gynecological

nurse practitioner program. (see Appendix A for course outline)

The data collection instrument used in this study was a structured questionnaire modified by this researcher for use in the study. The basis for the questionnaire used in this study was the questionnaire now in use in the UVM study mentioned above.

The UVM questionnaire has been developed for a current study which is evaluating the extent to which the UVM Family Nurse Practitioner Program is preparing nurses to function in expanded roles. The UVM questionnaire is designed to elicit nurses' perceptions of their functions, knowledge, skills, and attitudes. One portion of the questionnaire elicits frequency of use of specific expanded role skills. The authors of the UVM study indicate that further validation procedures are planned. (Vacek, Note 1)

Following a review of the course outline for the maternal-gynecological nurse practitioner program being studied, this researcher selected specific areas of inquiry for the present study. After determining appropriate areas of inquiry from the course outline, questions regarding these areas were extracted and used from the UVM questionnaire. Minor rewording of some questions was performed so that the questions were specific to the maternal-gynecological course. In addition to questions related to specific areas of study, such as physical examination and history taking, questions

from the UVM questionnaire designed to elicit demographic data were used. Further, questions from the UVM questionnaire regarding difficulties in various aspects of practice, need for additional knowledge and skills, and satisfaction with various aspects of the present job were used. All of the questions used in this study were verbatim from the UVM questionnaire except for questions 5 and 12. Question five asks whether the nurse has been employed since completion of the nurse practitioner program. Question 12 asks whether the nurse has received a salary increase based specifically on completion of the nurse practitioner program. These two questions were composed by this researcher, since this study was concerned only with currently practicing nurses, and since a salary increase might be an incentive to utilization of specific skills in practice.

Pilot Study

Prior to the use of the questionnaire in this study, a pilot study was done to determine whether this instrument would elicit the intended data. The questionnaire was given to a currently practicing graduate of a family nurse practitioner program in North Carolina. This respondent determined that the questions were clearly stated and she had no difficulty completing the questionnaire. Review of the pilot study questionnaire by this researcher revealed that the intended types of data had been elicited by the questionnaire.

Procedures

A copy of the questionnaire (see Appendix C for questionnaire) and a cover letter (see Appendix D for cover letter) explaining the purpose of this study were mailed to all participants in this study. A stamped, return-addressed envelope was enclosed with each questionnaire. Participants were asked to mail an enclosed numbered postcard separately when they returned the questionnaire. (see Appendix E for postcard) This allowed identification of subjects who had not responded and maintained anonymity of the questionnaires returned. Remuneration in the form of one dollar (\$1.00) was enclosed with the questionnaire for each participant.

Ten days following the initial mailing of the questionnaire, an attempt was made to contact by telephone those subjects who had not yet responded. Within two weeks of the initial mailing of the questionnaire all 23 subjects who had been contacted successfully had returned mailed questionnaires.

Selection of Subjects

A total of 25 female graduates had completed the maternal-gynecological nurse practitioner program when this study was initiated. Two of the graduates could not be contacted as current mailing addresses were not available. One of the graduates returned a blank questionnaire and indicated that she was not employed at this time. Three of the graduates indicated that they had answered parts of the

questionnaire in terms of previous employment, and their responses were not used in the data analysis.

Thus the sample population for this study consisted of 19 female graduates of the maternal-gynecological nurse practitioner program. All 19 graduates were registered nurses currently practicing nursing in the same state.

Description of Sample

The 19 subjects in this study were from various age groups: three were in the age group 20 through 29, six were in the age group 30 through 39, five were in the age group 40 through 49, and three were in the age group 50 and older. The majority of the sample population were married (15), two were widowed, one was divorced/separated, and one had never been married.

The subjects were from various basic nursing education preparations: 12 had received a diploma in nursing, five had received an associate degree, and two had received a bachelor's degree in nursing. The bachelor's degree was the highest degree held by any member of the sample population.

Ten of the total sample indicated that they had completed their education prior to 1965. Three had completed their education between 1965-1970, and six had completed their education since 1970.

The nurses in the sample indicated practice within several different settings. Twelve were employed currently

in community health settings. Two were practicing in hospital out-patient settings, two indicated practice in public schools, and one each indicated employment in the remaining settings (private physician's office, college health service, Planned Parenthood).

Eleven of the 19 nurses in this sample had been employed in nursing for more than 10 years, and nine had been employed in the current position for more than four years. Seventeen of the nurses indicated that they worked 40 hours per week.

Data elicited regarding salary revealed that 13 of the sample population received an average monthly salary in the \$750.00 - \$900.00 range. The lowest salary range indicated was \$450.00 - \$600.00, and the highest salary range indicated was \$1050.00 - \$1200.00. Nine of the nurses indicated that their salaries were computed on an annual basis, six indicated a monthly basis, and three indicated an hourly basis for salary computation. One nurse was paid bimonthly. Seventeen of the nurses indicated that they had not received a salary increase based on completion of the maternal-gynecological nurse practitioner program. Two nurses indicated that they had received such a salary increase. All of the sample indicated that they worked during the day shift. (see Appendix F for "Description of Sample" data)

CHAPTER IV

ANALYSIS OF DATA

Analysis Design

Data from the 19 questionnaires used in this study was analyzed in terms of the total number and percent of the entire sample responding to the questions as indicated. Each percent figure was rounded off to the nearest whole percent. The same number of responses represented varying percentages depending on the question examined, as all subjects did not answer all questions. The percentages are thus based on the total number of the sample who answered the particular question. Additional analyses by correlation which may or may not be directly related to this study were performed.

Frequency of Performance of Specific Expanded Role Skills

Examination of responses to frequency of performance of specific expanded role skills revealed a small number of responses in various frequency groups. With small numbers of responses in various frequency groups, it was more difficult to detect the presence of patterns in the responses. Thus the six categories of frequency of performance were grouped into two major categories in attempt to allow recognition of patterns in the responses. The two categories were: "Often" - frequencies of once daily or more often,

and "Not Often" - frequencies of less often than once daily.

Expanded role skills performed "Often" by at least 10 of the respondents were: taking a comprehensive history of a patient with a presenting complaint (12), performing an interval or follow-up examination on a patient with a presenting complaint (11), collecting a Pap Smear (11), conducting appointments with patients (13), obtaining as a part of a history a patient's perception of his problem and how it affects his life (11), assessing a patient's health habits (10), teaching and counseling a patient concerning family planning (14), counseling a patient about available community resources that might be relevant to his needs (15), and teaching a female patient self-breast examination (11).

Expanded role skills performed "Not Often" by at least 10 of the respondents were: performing an initial complete physical exam on a non-pregnant patient (14), performing an initial complete exam on a pregnant patient (17), performing a pelvic and abdominal examination on a patient (11), performing a breast examination on a patient (10), independently diagnosing and initiating care for an acute condition according to a protocol (18), prescribing medications for an acute condition according to a protocol (16), and initiating adjustments in medication for a chronic condition according to a protocol (14). (see Appendix G for "Frequency of Performance of Specific Expanded Role Skills" data)

Occurrence of Difficulties in Specific Areas of Practice

For the same reason described in "Frequency of Performance of Specific Expanded Role Skills" above, frequencies of occurrence of specific difficulties were grouped into two categories. The two categories were: "Often" - frequencies of once weekly or more often, and "Not Often" - less frequently than once weekly.

Some nurses indicated difficulty "Often" in every area questioned. Eight of the nurses indicated difficulty "Often" in the area of applying knowledge and skills learned in the nurse practitioner program. Five of the nurses reported difficulty "Often" in the area of physician acceptance of the things done by the nurse. Four of the nurses reported difficulty "Often" in the areas of patient acceptance of things done by the nurse and co-worker acceptance of things done by the nurse. (see Appendix H for "Occurrence of Difficulties in Specific Areas of Practice" data)

Need for Additional Knowledge and Skills in Specific Areas

Degrees of expressed need for additional knowledge and skills were regrouped into two categories for the same reason described in "Frequency of Performance of Specific Expanded Role Skills" discussed earlier. The two categories were: "Some" - includes "Some" and "Very Much", and "Very Little or None".

Eleven of the nurses indicated a need for "Some" additional knowledge and skill in every area specified. Seventeen nurses indicated "Some" need for additional knowledge and skill in "drawing up" treatment and management plans for acutely ill patients. Sixteen nurses indicated "Some" need in the area of doing a general physical exam. Sixteen nurses indicated "Some" need in the area of preparing treatment and management plans for patients who have chronic illnesses. Eleven nurses expressed "Some" need in the area of evaluating a patient's family, home, and community. Twelve nurses indicated "Some" need in the area of obtaining comprehensive histories from patients. (see Appendix I for "Need for Additional Knowledge and Skill in Specific Areas" data)

Satisfaction With Amount of Time Involved in Performing Specific Functions

Three nurses were "Satisfied" or "Very" satisfied with the amount of time involved in performing all specific functions. Fourteen nurses were "Satisfied" or "Very" satisfied with the amount of time involved in giving follow-up care to patients. Ten nurses were "Not Very" satisfied with the amount of time involved in prescribing medications. (see Appendix J for "Satisfaction With Amount of Time Involved in Performing Specific Functions" data)

Satisfaction With Specific Aspects of Present Job

Sixteen of the nurses were "Satisfied" or "Very" satisfied with the amount of authority and responsibility possessed (five - "Very", 11 - "Satisfied"). "All things considered", 15 nurses were "Satisfied" or "Very" satisfied with their work (six - "Very", nine - "Satisfied"). Four nurses were "Not Very" satisfied with their work. Nine nurses were "Satisfied", and 10 were "Not Very" satisfied with the amount of pay received. (see Appendix K for "Satisfaction With Specific Aspects of Present Job" data)

Correlations

It was neither the intent of this researcher nor the purpose of this study to demonstrate significant correlations among groups of responses. Two correlation processes and some specific results are described only as they were of interest to this researcher.

The individual responses to questions 14 through 29 were correlated with the individual responses to questions one through 13 and with questions 30 through 50. Frequencies for questions 14 through 20 were regrouped into two categories for purposes of data analysis: "Often" - daily or more frequently, and "Not Often" - less frequently than daily. Due to the small size of the sample it was difficult to detect the presence of any significant relationships. Those correlations which did indicate a significant relationship (significant at 0.10 level) are presented and

discussed.

All nurses who did not take a comprehensive history (question 14) "Often" were diploma prepared nurses. All Associate Degree (AD) and Bachelor of Science in Nursing (BSN) degree prepared nurses performed this skill "Often". This correlation is presented in Table 1.

Table 1

Frequency of Performance of Comprehensive History
Taking According to Education

n = 19

Question 14: Taking a comprehensive history	Education		
	<u>Diploma</u>	<u>AD</u>	<u>BSN</u>
Often	5 (42%)	5 (100%)	2 (100%)
Not Often	7 (58%)	0	0

Significance = 0.0395

Also noted regarding Question 14, all of the nurses who had completed their education after 1970 performed this function "Often". Of the 10 nurses who had completed their education prior to 1965, six did not perform this function "Often". This correlation is presented in Table 2.

Table 2

Frequency of Performance of Comprehensive History
Taking According to Year Education Completed
n = 19

Question 14: Taking a compre- hensive history	Year Education Completed		
	<u>Before 1965</u>	<u>1965-70</u>	<u>After 1970</u>
Often	4 (40%)	2 (67%)	6 (100%)
Not Often	6 (60%)	1 (33%)	0

Significance = 0.0545

All persons in the age group 50 and older performed an interval physical exam (Question 17) "Often", and persons in the age group 20 through 29 did not perform this skill "Often". Persons in the age group 30 through 39 and in the age group 40 through 49 were inconsistently divided in frequency of performance of this skill. This data is presented in Table 3.

Table 3

Frequency of Performance of Interval
Physical Exam According to Age
n = 17

Question 17: Perform interval physical exam	Age Group			
	<u>20-29</u>	<u>30-39</u>	<u>40-49</u>	<u>50 and older</u>
Often	0	5 (83%)	2 (40%)	3 (100%)
Not Often	3 (100%)	1 (17%)	3 (60%)	0

Significance = 0.0350

Similarly, all of the members of the age group 50 and older performed a pelvic exam (Question 18) "Often", while none of the youngest age group performed this function "Often". This correlation is presented in Table 4.

Table 4

Frequency of Performance of Pelvic
Exam According to Age

n = 17

Question 18: Perform pelvic and abdominal exam	Age Group			
	<u>20-29</u>	<u>30-39</u>	<u>40-49</u>	<u>50 and older</u>
Often	0	2 (33%)	2 (40%)	3 (100%)
Not Often	3 (100%)	4 (67%)	3 (60%)	0
Significance = 0.0881				

All of the persons in the age group 50 and older collected a Pap Smear (Question 19) "Often", while none of the persons in the age group 20-29 performed this function "Often". This correlation is presented in Table 5.

Table 5

Frequency of Performance of Pap Smear Collection
According to Age

n = 17

Question 19: Collect Pap Smear	Age Group			
	<u>20-29</u>	<u>30-39</u>	<u>40-49</u>	<u>50 and older</u>
Often	0	4 (67%)	3 (60%)	3 (100%)
Not Often	3 (100%)	2 (33%)	2 (40%)	0
Significance = 0.0881				

All of the respondents in the age group 50 and older performed a breast exam (Question 20) on a patient "Often". None of the respondents in the age group 20-29 performed this function "Often". This correlation is presented in Table 6.

Table 6

Frequency of Performance of Breast Examination
According to Age

n = 17

Question 20: Perform Breast Exam	Age Group			
	<u>20-29</u>	<u>30-39</u>	<u>40-49</u>	<u>50 and older</u>
Often	0	4 (67%)	1 (20%)	3 (100%)
Not Often	3 (100%)	2 (33%)	4 (80%)	0

Significance = 0.0378

Both of the respondents who had been employed in the current position for less than three years initiated adjustments in medications for a chronic condition according to a protocol (Question 24) "Often". Eight of the nine respondents who had been employed in the current position for five or more years did not perform this function "Often". This correlation is presented in Table 7.

Table 7

Frequency of Medication Adjustments
According to Years Employed
in Current Position

n = 19

Question 24: Adjust medica- tions according to protocol	Years Employed in Current Position			
	<u>1-2</u>	<u>3</u>	<u>4</u>	<u>5 or more</u>
Often	2 (100%)	1 (25%)	1 (25%)	1 (11%)
Not Often	0	3 (75%)	3 (75%)	8 (89%)

Significance = 0.0828

All of the respondents who prescribed medications for an acute condition according to a protocol (Question 22) "Often" were "Very" satisfied with the amount of time involved in this function. Among the 14 who did not perform this function "Often", 10 were "Not Very" satisfied with the amount of time involved in this function. This data is presented in Table 8.

Table 8

Satisfaction with Medication Prescription
According to Frequency of Medication Prescription

n = 8

Question 47: <u>Role in Prescrib- ing Medications</u>	Frequency of Medication Prescription	
	<u>Often</u>	<u>Not Often</u>
Very Satisfying	2 (100%)	1 (17%)
Satisfying	0	3 (50%)
Not Very Satisfying	0	2 (33%)

Significance = 0.0071

Neither of the two baccalaureate prepared nurses was "Satisfied" with her work in general (Question 50). Among the 12 diploma prepared nurses, 10 were "Satisfied" or "Very" satisfied with their work in general. Four of the five associate degree prepared nurses were "Satisfied" or "Very" satisfied with their work in general. This correlation is presented in Table 9.

Table 9
Satisfaction With Work According
to Education

n = 19

Question 50: Satisfaction with Work	Education		
	Diploma	AD	BSN
Very	5 (42%)	1 (20%)	0
Satisfied	6 (50%)	3 (60%)	0
Not Very	1 (8%)	1 (20%)	2 (100%)

Significance = 0.0561

A final set of correlations was performed between the expanded role skills questions (Questions 14 through 29) and the demographic data (Questions 1 through 13). Each category of frequencies of performance for Questions 14 through 29 was assigned a number: 3+/day = 1, 2-3/day = 2, etc. A mean score was then computed for each respondent based on his total responses to questions 14 through 29. In this manner the lower the respondent's total score, the greater the respondent's overall involvement in performance of the

expanded role skills. None of the correlations were shown to be statistically significant. However, several interesting facets were noted and are discussed.

The nurse employed in the college or university health service setting demonstrated most frequent use of all of the skills in general. The nurse employed in the hospital outpatient department demonstrated the least frequent use of the expanded role skills. This data is presented in Table 10.

Table 10

Involvement According to Setting

<u>Setting</u>		<u>Mean Involvement Score</u>
College or University Health Setting	-	2.1875
Planned Parenthood	-	2.8750
Physician's Office	-	3.5000
Public School	-	3.6875
Hospital Out-Patient	-	3.8229

The nurse who indicated the lowest salary range used the skills least frequently. The nurse who indicated the highest salary range used the skills most frequently. This data is presented in Table 11.

Table 11
Involvement According to Salary

<u>Salary Range</u>		<u>Mean Involvement Score</u>
\$1050.00 - \$1200.00	-	2.8750
\$900.00 - \$1050.00	-	3.4063
\$750.00 - \$900.00	-	3.8462
\$600.00 - \$750.00	-	3.1250
\$450.00 - \$600.00	-	4.9375

A final observation based on this set of correlations was that the mean scores of all respondents were between 2.0000 and 4.9999. These mean scores were considered "average" in terms of frequency of performance of the skills. These "average" scores might explain the lack of significant correlations in this study: generally most subjects were performing functions at an "average" frequency; no subjects were performing all functions either very frequently or very infrequently.

CHAPTER V

DISCUSSION AND CONCLUSIONS

Discussion

Consideration of the data collected revealed that all nurses were using some expanded role skills taught in the maternal-gynecological nurse practitioner program daily. The most frequently performed skills by all nurses were skills involving history taking, interviewing and counseling, collecting a Pap Smear, patient teaching regarding self-breast exam, and the performance of interval physical examinations. The least frequently performed skills were those concerned with the complete physical exam and more independent functions according to protocols.

Although the complete physical exam of the pregnant and non-pregnant female were listed as major areas taught in the program, only seven of the graduates performed either of these functions daily. History taking was also listed as a major component of the program. History taking and physical exam are both considered vital parts of the data base collection for a patient. Comprehensive histories are done by 12 of the nurses daily, yet only seven nurses perform complete physical exams daily. It is difficult to understand why the nurse who has been educated to perform both functions performs only one of these functions most of

the time. The subjects' interpretations of the term "comprehensive history" must be questioned.

Further, 13 nurses indicated that they conduct appointments with patients daily or more frequently. If nurses are conducting the appointments, yet are taking only histories and performing few physical exams, the the effectiveness of the appointment for the patient's well-being must be questioned. Perhaps rewording to infer independent conducting of appointments with patients to include consultation as necessary would have facilitated more accurate interpretation of this question.

Every area of difficulty specified was experienced "Often" by at least one nurse. The most frequent area of difficulty was the application of program content in the practice setting. Physician and co-worker acceptance of the things done by the nurse presented difficulty "Often" for at least four nurses. Perhaps these two areas of difficulty are related in that, if co-workers do not acknowledge and allow the nurse to utilize her advanced skills in her work setting, she will probably not use these skills frequently.

More than one-half of the nurses indicated a need for additional knowledge and skill in all areas identified in the questionnaire. The areas of greatest expressed need were concerned with functions which all nurses performed least frequently. These areas were concerning the general

physical exam and independent functioning according to protocols. The areas of least expressed need were history taking and environmental assessment. These latter two areas describe functions which most of the nurses performed most frequently. Correlations between the frequency of performing functions and expressed need for additional knowledge and skill were not significant in this population.

Most nurses were satisfied with time involved in performing most functions. The one area in which nurses were dissatisfied was that of medication prescription. It was noted earlier that independent functions according to protocols such a medication prescription was one of the least frequently performed functions. Correlations between these independent functions and satisfaction levels were not significant in this sample population.

Most nurses were "Satisfied" or "Very" satisfied with their present work in general. It was noted that both baccalaureate prepared nurses were "Not Very" satisfied with their present work "all things considered". Most nurses were dissatisfied with the amount of pay they currently received.

In view of the small size of the sample population in this study, significant correlations among the responses cannot be easily detected. A few correlations were significant technically. For example, all baccalaureate and associate degree prepared nurses performed history taking

"Often". Since there were only two and five subjects respectively in each of these groups, this correlation may have been coincidental.

Nurses who completed their basic nursing education prior to the initiation of expanded role programs in 1965 performed one function (comprehensive history taking) less frequently than did more recently educated nurses. However, nurses in the oldest age range performed four of the physical examination functions (Questions 17 through 20) "Often", while the youngest respondents did not perform these functions "Often". Thus the reason for frequency of performance of specific expanded role skills was not clear. It would appear from this data that experience rather than recency of education may have been a major determinant of frequency of performance of some skills. Also, the less time a nurse had been employed in the present setting, the more likely she was to function according to a protocol.

The setting in which the nurse most frequently used the expanded role skills was the college or university health service. The least likely setting for use of these skills was the out-patient hospital setting. Perhaps the absence of a physician in the former setting and the easy accessibility of a physician in the hospital was one factor in determining frequency of use of these skills. However, any number of other factors may have been more likely

determinants of frequency of use of these skills.

It was neither the intent of this researcher nor the purpose of this study to show significant correlations among groups of responses. A few occurrences in the correlation processes were mentioned only in that they were interesting to this researcher.

The findings of this study were inconclusive in regard to correlations between specific expanded role skills and other data elicited. Though this researcher frequently has reminded the reader that the sample consists of only 19 subjects, it must be recognized that only 25 nurses have completed the maternal-gynecological nurse practitioner program. Thus it was likely that the findings of this study were representative of the entire target population for this study.

As described in "Data Collection and Analysis", responses to the questions posed in the questionnaire used in this study were not consistent. Individual responses appeared arbitrary in the data analysis of this study. Such a pattern of inconsistent responses might be significant in this study. Perhaps there is no setting, age group, educational preparation, etc., which may be used to determine selection of participants in such expanded role programs.

Conclusions

All nurses in this study used some of the expanded role skills taught in the maternal-gynecological nurse practitioner program daily. The skills used most frequently were those related to history taking, interval physical exam, interviewing, and environmental assessment. The skills used least frequently were those related to complete physical exam and independent functioning according to protocol. The latter included the prescription of medications for an acute condition, diagnosis and initiation of care for an acute condition, and the adjustment of medications for a chronic condition according to a protocol.

Summary

The purpose of this study was to elicit the current frequency of use of specific expanded role skills in clinical practice by graduates of one maternal-gynecological nurse practitioner program offered Fall, 1974, Fall, 1975, and Spring, 1976, at a university in the Southeastern United States. Unless the actual subsequent use of skills taught in expanded role programs is validated, then the value and existence of such programs must be questioned.

The subjects were 19 currently practicing registered nurses who had completed a maternal-gynecological nurse practitioner program at a university in the Southeastern United States. The subjects were asked by mailed questionnaire how frequently they used specific expanded role skills

taught in this nurse practitioner program. Although the sample population consisted of only 19 subjects, it must be recognized that only 25 nurses had completed this nurse practitioner program. Thus it was likely that the findings of this study were representative of the entire target population for this study.

The data were collected using portions of a University of Vermont Medical Center questionnaire designed to elicit frequency of use of specific expanded role skills. Data analysis was done in terms of the total number and percent of subjects responding to each question.

The results of this study indicated that all nurses in the sample used on a daily basis some of the expanded role skills taught in the maternal-gynecological nurse practitioner program. The skills used most frequently were those related to history taking, interviewing, interval physical exam, and environmental assessment. The skills used least frequently were those related to complete physical exam and independent functioning according to a protocol. The latter included the prescription of medications for an acute condition, diagnosis and initiation of care for an acute condition, and the adjustment of medications for a chronic condition according to a protocol.

Methodological Implications

Based on the results of this study this researcher suggests three changes in the questionnaire used, should future similar studies be undertaken. (see Appendix C for questionnaire) First, regarding the questions related to specific expanded role skills (Questions 14 through 29), a response category entitled "Setting or employer does not permit use of this skill" should be provided for each of these questions in addition to the various frequencies provided. Provisions of such a category could facilitate explanation of infrequent use of particular skills.

A second suggested change in the questionnaire is that a place be provided for "any comment" related to the program or the questions being asked. The need for such a provision was indicated in this study as detailed explanatory notes were attached to the returned questionnaires of three members of the sample population.

Finally, it is suggested that two questions be revised for clarity to the respondent. "Comprehensive history" in Question 14 should be reworded to imply complete medical history. "Conducting appointments" as stated in Question 23 and Question 41 should be further explained so that independent conducting of appointments by the nurse to include consultation as necessary is implied.

Research Implications

It is recommended by this researcher that some type of follow-up study be continued for graduates of this program and for graduates of all expanded role programs to elicit subsequent frequency of use of skills taught in the programs. Validation of the use of specific expanded role skills can guide future decisions to alter, continue, or discontinue existing expanded role programs. Correlations between frequencies of use of specific skills and demographic data on larger sample populations might guide the selection of participants in expanded role programs.

Based on the results of this study, several implications for directors of such expanded role programs are suggested. First, in the geographic area from which the sample population for this study was taken, nurses in hospital out-patient settings tended to use the expanded role skills least frequently of all the nurses questioned. The program director, in interviewing future applicants for such programs, might consider the importance of the setting in determining the role of the nurse. The nurse's expectations for herself after program completion and those of her setting should be assessed and evaluated in terms of program content and level of nursing practice advocated by the program. Unless the nurse and her work setting desire nursing practice in the expanded role, such an applicant should be directed to more appropriate continuing education programs.

A need for this consideration is suggested by the fact that the most frequent area of weekly difficulty expressed was the application of program content in the practice setting.

The age of the nurse was a possible factor in determining the use of certain expanded role skills in this study. Thus the director of such a program might be more cautious in encouraging a very young nurse (age 20 through 29) to pursue such a program in the absence of appropriate expectations of her by her work setting and by the nurse herself.

Similarly, the number of years employed in the present work setting was a possible factor in determining the use of certain skills. The director might be more encouraging to applicants employed in the current setting for a short time (less than three years) than to applicants employed in the current setting for longer periods of time. Perhaps change in role is more difficult after more time has passed, and more recent employees may experience less difficulty in changing their roles.

Regarding the specific expanded role program which was studied some implications for the director are suggested by the results of this study. As certain groups of skills are not used frequently by most graduates, the program content and teaching methods might be re-evaluated with appropriate instructors and preceptors. These same groups of skills might also be discussed with physicians

in the geographic area serviced by the university. If most physicians do not advocate the use of these skills by nurses, then the inclusion of such content in the program must be questioned seriously. Physician support is imperative, as legally in North Carolina the nurse may perform medical acts only under the supervision of a licensed physician. (North Carolina (State), Nursing Practice Act)

Further, in this study more than one-half of the nurses indicated a need for additional knowledge and skills in all areas identified in the questionnaire. This finding supports the need for re-evaluation of program content and teaching methods.

In an attempt to determine the effect of the expanded role program on the role of the nurse, a control group of nurses who have not attended such a program might be compared with a similar group of nurses who have completed such a program. Such a study is currently in progress in Vermont. Studies such as this may indicate the extent to which expanded role programs actually prepare nurses to function in expanded roles. (Vacek, Note 1)

In view of the findings of this study, this researcher concludes that the maternal-gynecological program studied should not be continued as it has been offered to date. Some evaluation and changes must occur if program graduates are to perform expanded role skills taught in the program.

The most frequently used skills as revealed in this study are those traditionally performed by nurses: history taking, counseling, patient teaching. A nurse could perform such skills without attending an expanded role program such as the one described in this study. The more independent functions associated with nursing practice in an expanded role are performed infrequently by most nurses in this study. Further, most nurses described their work at present as "Satisfying". Those nurses may not desire to perform expanded role skills frequently.

If, for any reason(s), nurses are not using skills taught in such expanded role programs, then the existence of such programs is not justified. More useful continuing education programs should be identified and provided for nurses.

Regardless of the specific nature, some follow-up evaluation of expanded role programs must occur. By determining the usefulness of the course content of these programs, the large expenditures of time, money, and effort which these programs consume can then be justified.

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Course Outline

Personality and Psychological Aspects

100-101 Registration

100-102 In class - Self study - anatomy and physiology of female and prepare an appropriate breast self examination

100-103 Menstrual Menstrual Physiological Aspects - with a.m. - Hormones and Physiology of the Menstrual Cycle - Female Cycle, Hormones & Menstruation

100-104 Lunch

100-105 Menstrual Function - Infertility

100-106 Physiology of Pregnancy

100-107 Lunch

100-108 Long-Term Pregnancy

APPENDIX A

MATERNAL-GYNECOLOGICAL NURSE PRACTITIONER
COURSE OUTLINE

100-109 Lunch

100-110 History and Physical Examination of the Female Patient

100-111 Family Social Supportive Program

100-112 Lunch

100-113 Menstrual Laboratory or Patient and Menstrual Cycle

100-114 Lunch

100-115 Long Term Pregnancy

100-116 Lunch

100-117 Complications of Pregnancy

100-118 Lunch

100-119 Preparation for Delivery

100-120 Lunch

100-121 Fetal Development (FBS)

100-122 Lunch

100-123 Clinical Experience to be Assigned

100-124 Lunch

Course Outline

Maternity and Gynecological Nursing

- August 28 Registration
- Sept 2 No class - Self study - anatomy and physiology
of Breast and prepare to demonstrate breast
self examination
- Sept 9 Memorial Hospital Educational Building Lobby -
9-12 9:00 a.m. Anatomy and Physiology of the Normal
Woman - Female Cycle, Menarche to Menopause
- 12-1 Lunch
- 1-4 Ovarian Function - Infertility
- Sept 16
9-12 Physiology of Pregnancy
12-1 Lunch
1-4 Drug Therapy During Pregnancy
- Sept 23
9-12 History and Physical Examination of the Non-
Pregnant Woman - Film
- 12-1 Lunch
1-4 History and Physical Examination of the
Pregnant Woman
- Sept 30
9-12 Psycho-Social Aspects of Pregnancy
12-1 Lunch
1-4 Practice Laboratory on Pelvic and Abdominal
Exams
- Oct 7
9-12 High Risk Pregnancy
12-1 Lunch
1-4 Complications of Pregnancy
- Oct 14
9-12 Preparations for Delivery
12-1 Lunch
1-4 Fetal Development (TBA)
- Oct 21-
Nov 18 Clinical Experiences To Be Arranged

Nov 25

1-12

Human Sexuality - Intrapartum Care

12-1

Lunch

1:30-4

Genetics (TBA)

Dec 2

9-12

Interpretation of Laboratory Tests - Ob & Gyn

12-1

Lunch

1-4

Gynecological Malignancy

Dec 9

9-12

Family Planning (TBA)

12-1

Lunch

1-4

Final Exam

APPENDIX B

WRITTEN PERMISSION TO USE UNIVERSITY OF VERMONT
MEDICAL CENTER QUESTIONNAIRE

The University of Vermont

COLLEGE OF MEDICINE, BIOMETRY FACILITY
GIVEN BUILDING, BURLINGTON, VERMONT 05401
(802) 656-2526



December 14, 1976

Deborah Nifong
Route 9, Box 17 Clodfelte Rd.
Winston-Salem, North Carolina

Dear Ms. Nifong,

In answer to your request, I have enclosed a copy of the report of our evaluation of the roles of nurses who have graduated from the U.V.M. Family Nurse Practitioner Program. It includes information on our survey design and method of data analysis, as well as a summary of the results.

We are currently preparing a detailed description of our questionnaire and the conceptual model for health care delivery on which it was based. I will be happy to send along a draft of this report if you think it might be of use to you. I have misplaced the address you gave me over the phone, so please let me know if the one above is incorrect. You are welcome to use any portions of our questionnaire that are relevant to your study but, of course, request that any resulting publication acknowledges its use.

Thank you for your interest in our study. Please let me know if I can be of any further assistance. Also, I would be very interested in the results of your research.

Sincerely,

Pamela Vacek

Pamela Vacek

An Equal Opportunity Employer

APPENDIX C
QUESTIONNAIRE USED IN THIS STUDY

QUESTIONNAIRE

GENERAL INFORMATION

1. YEAR OF BIRTH _____
2. SEX: ☐ MALE ☐ FEMALE
3. MARITAL STATUS: ☐ CURRENTLY MARRIED ☐ WIDOWED
☐ DIVORCED/SEPARATED ☐ NEVER MARRIED
4. EDUCATION:

	YEAR COMPLETED
DIPLOMA IN NURSING	_____
ASSOCIATE DEGREE IN NURSING	_____
BACHELOR'S DEGREE IN NURSING	_____
BACHELOR'S DEGREE IN ANOTHER FIELD	_____
MASTER'S DEGREE IN NURSING	_____
MASTER'S DEGREE IN ANOTHER FIELD	_____
DOCTORATE	_____
5. SINCE COMPLETING THE MATERNITY-GYNECOLOGICAL (ON/GYN) NURSE PRACTITIONER PROGRAM AT _____, HAVE YOU WORKED REGULARLY? ☐ YES ☐ NO
If "No", PLEASE LIST LENGTHS OF UNEMPLOYMENT PERIODS. _____
6. WHICH OF THE FOLLOWING BEST DESCRIBES YOUR PRESENT EMPLOYMENT?
☐ HOSPITAL IN-PATIENT SERVICE
☐ HOSPITAL OUT-PATIENT DEPARTMENT/CLINIC
☐ HOSPITAL EMERGENCY ROOM
☐ PHYSICIAN'S OFFICE OR GROUP PRACTICE
☐ HOME HEALTH AGENCY, VISITING NURSES ASSOC. OR PUBLIC HEALTH
☐ CONVALESCENT OR NURSING HOME
☐ COLLEGE OR UNIVERSITY HEALTH SERVICE
☐ PUBLIC SCHOOL NURSING
☐ OTHER: PLEASE SPECIFY: _____

7. HOW LONG HAVE YOU BEEN EMPLOYED IN YOUR CURRENT POSITION? _____ YEARS
8. WHAT IS THE TOTAL NUMBER OF YEARS YOU HAVE WORKED IN NURSING EMPLOYMENT? _____ YEARS
9. HOW MANY HOURS PER WEEK DO YOU USUALLY WORK? ☐ LESS THAN 40/WEEK
☐ 40/WEEK
☐ MORE THAN 40/WEEK
10. WHAT IS YOUR AVERAGE MONTHLY SALARY?

_____ \$300.00 OR LESS	_____ \$750.00 TO 900.00
_____ \$300.00 TO 450.00	_____ \$900.00 TO 1050.00
_____ \$450.00 TO 600.00	_____ \$1050.00 TO 1200.00
_____ \$600.00 TO 750.00	_____ \$1250.00 OR MORE
11. ON WHAT BASIS IS YOUR SALARY CALCULATED?
☐ HOURLY RATE ☐ FEE FOR SERVICE
☐ WEEKLY RATE ☐ % EMPLOYER'S GROSS
☐ MONTHLY RATE ☐ ANNUAL RATE
☐ OTHER: PLEASE SPECIFY _____
12. HAVE YOU RECEIVED A SALARY INCREASE BASED SPECIFICALLY ON YOUR COMPLETION OF THE MATERNITY-GYNECOLOGICAL NURSE PRACTITIONER PROGRAM AT _____?
☐ YES ☐ NO
13. DURING WHAT TIME OF THE DAY DO YOU WORK?
☐ DAY ☐ EVENING
☐ NIGHT ☐ ROTATE

continued

THE QUESTIONS WHICH FOLLOW ARE DESIGNED TO TELL THE RESEARCHER WHETHER OR NOT YOU PERFORM SPECIFIC FUNCTIONS AND SKILLS AS A PART OF YOUR PRESENT JOB AND HOW FREQUENTLY YOU PERFORM THEM. IF YOU NEVER PERFORM A CERTAIN FUNCTION, CHECK THE SELECTION "LESS THAN 1/MONTH."

I PERFORM THIS FUNCTION THE FOLLOWING NUMBER OF TIMES:

	2x/DAY	1-2/DAY	2-3/DAY	1/WEEK	1/Mo.	less than 1/Mo.
14. TAKE A COMPREHENSIVE HISTORY OF A PATIENT WITH A PRESENTING COMPLAINT:	-----	-----	-----	-----	-----	-----
15. PERFORM AN INITIAL COMPLETE PHYSICAL EXAM ON A NON-PREGNANT PATIENT:	-----	-----	-----	-----	-----	-----
16. PERFORM AN INITIAL COMPLETE PHYSICAL EXAM ON A PREGNANT PATIENT:	-----	-----	-----	-----	-----	-----
17. PERFORM AN INTERVAL OR FOLLOW-UP EXAMINATION ON A PATIENT WITH A PRESENTING COMPLAINT:	-----	-----	-----	-----	-----	-----
18. PERFORM A PELVIC AND ABDOMINAL EXAMINATION ON A PATIENT:	-----	-----	-----	-----	-----	-----
19. COLLECT A PAP SMEAR:	-----	-----	-----	-----	-----	-----
20. PERFORM A BREAST EXAMINATION ON A PATIENT:	-----	-----	-----	-----	-----	-----
21. INDEPENDENTLY DIAGNOSE AND INITIATE CARE FOR AN ACUTE CONDITION ACCORDING TO A PROTOCOL:	-----	-----	-----	-----	-----	-----
22. PRESCRIBE MEDICATIONS FOR AN ACUTE CONDITION ACCORDING TO A PROTOCOL:	-----	-----	-----	-----	-----	-----
23. CONDUCT APPOINTMENTS WITH PATIENTS:	-----	-----	-----	-----	-----	-----
24. INITIATE ADJUSTMENTS OF MEDICATIONS FOR A CHRONIC CONDITION ACCORDING TO A PROTOCOL:	-----	-----	-----	-----	-----	-----
25. OBTAIN AS A PART OF A HISTORY A PATIENT'S PERCEPTION OF HIS PROBLEM AND HOW IT AFFECTS HIS LIFE:	-----	-----	-----	-----	-----	-----
26. ASSESS A PATIENT'S HEALTH HABITS:	-----	-----	-----	-----	-----	-----
27. TEACH AND COUNSEL A PATIENT CONCERNING FAMILY PLANNING:	-----	-----	-----	-----	-----	-----
28. COUNSEL A PATIENT ABOUT AVAILABLE COMMUNITY RESOURCES THAT MIGHT BE RELEVANT TO HIS NEEDS:	-----	-----	-----	-----	-----	-----
29. TEACH A FEMALE PATIENT SELF-BREAST EXAMINATION:	-----	-----	-----	-----	-----	-----

continued

How often do you encounter difficulties in the following areas?

	DAILY	WEEKLY	MONTHLY	LESS THAN MONTHLY	NEVER
30. PATIENT ACCEPTANCE OF THE THINGS YOU DO IN HIS BEHALF:	_____	_____	_____	_____	_____
31. PHYSICIAN ACCEPTANCE OF THE THINGS YOU ARE TRAINED TO DO:	_____	_____	_____	_____	_____
32. ACCEPTANCE OF THE THINGS YOU DO BY CO-WORKERS:	_____	_____	_____	_____	_____
33. APPLYING KNOWLEDGE AND SKILLS YOU HAVE LEARNED IN THE NURSE PRACTITIONER PROGRAM WITHIN THE PRESENT PRACTICE SETTING:	_____	_____	_____	_____	_____

How great a need do you feel for additional knowledge and skills in the following areas?

	VERY MUCH	SOME	VERY LITTLE	NONE
34. OBTAINING COMPREHENSIVE HISTORIES FROM PATIENTS:	_____	_____	_____	_____
35. DOING A GENERAL PHYSICAL EXAM:	_____	_____	_____	_____
36. ASSESSING A PATIENT'S GENERAL HEALTH STATUS:	_____	_____	_____	_____
37. HELPING TO DRAW UP TREATMENT AND MANAGEMENT PLANS FOR ACUTELY ILL PATIENTS:	_____	_____	_____	_____
38. HELPING TO PREPARE TREATMENT AND MANAGEMENT PLANS FOR PATIENTS WHO HAVE CHRONIC ILLNESSES:	_____	_____	_____	_____
39. EVALUATING A PATIENT'S FAMILY, HOME, AND COMMUNITY:	_____	_____	_____	_____

40. PLEASE LIST OTHER KNOWLEDGES AND SKILLS NOT MENTIONED ABOVE FOR WHICH YOU FEEL A NEED: PLEASE LIST THEM FROM 1 (GREATEST NEED) TO 3:

1. _____
2. _____
3. _____

continued

IN YOUR PRESENT JOB, HOW SATISFYING DO YOU FIND THE AMOUNT OF TIME YOU SPEND PERFORMING THE FOLLOWING FUNCTIONS?

	VERY	SATIS- FYING	NOT VERY
41. CONDUCTING APPOINTMENTS WITH PATIENTS:	---	---	---
42. COLLECTING PATIENT HISTORIES:	---	---	---
43. PERFORMING PHYSICAL EXAMINATIONS:	---	---	---
44. SHARING IN ARRIVING AT DIAGNOSES:	---	---	---
45. YOUR ROLE IN PREPARING TREATMENT AND MANAGEMENT PLANS:	---	---	---
46. GIVING FOLLOW-UP CARE TO PATIENTS:	---	---	---
47. YOUR ROLE IN PRESCRIBING MEDICATIONS:	---	---	---

IN GENERAL, HOW SATISFIED ARE YOU WITH THE FOLLOWING ASPECTS OF YOUR PRESENT JOB?

	VERY	SATISFIED	NOT VERY
48. THE AMOUNT OF AUTHORITY AND RESPONSIBILITY WHICH YOU HAVE:	---	---	---
49. THE PAY YOU RECEIVE:	---	---	---
50. ALL THINGS CONSIDERED, HOW SATISFIED ARE YOU WITH YOUR WORK?	---	---	---

APPENDIX D

COVER LETTER FOR QUESTIONNAIRE

1614 W. 1st Street
Winston-Salem, NC 27104

27 January 1977

Dear Colleague,

I am a graduate student in Nursing Administration at the University of North Carolina at Greensboro and am contacting you regarding a research study which I am conducting.

I am also a Family Nurse Practitioner (University of Vermont Program). As such I am very interested in expanded role programs currently offered by various schools.

I have consulted with _____ who coordinated the Maternity-Gynecological (Ob-Gyn) Nurse Practitioner Program at _____ which you have completed. As a result of the program description provided by _____, specific expanded role skills which the _____ Program taught have been delineated. _____ provided me with the names of graduates of this program, and supports this research study.

This study is designed to determine to what extent Program graduates use specific expanded role skills taught in the Program. I believe that if this can be determined, directors of such programs can appropriately plan future expanded role programs.

To complete this study, I request your participation in completing the enclosed anonymous questionnaire. Please mail the enclosed postcard at the same time you mail the completed questionnaire, but not in the same envelope. Your name is not required on either the questionnaire or the postcard. Once you have mailed the questionnaire your name cannot be associated with it.

If you would like a copy of the tabulated results of this study when completed, please make note of this on the postcard.

In view of strict research deadlines, I urgently request that you complete and mail the questionnaire and postcard within two days after receipt.

Enclosed please find remuneration in the amount of one dollar for your time in participating in this study.

I thank you in advance for your assistance in this study.

Sincerely,

Deborah H. Nifong, RN, FNP

Source: A. Pitts
1814 St. Peter St.
Singapore 200000

APPENDIX E

POSTCARD ENCLOSED IN QUESTIONNAIRE



Deborah H. Nifong
1614 W. First St.
Winston-Salem, NC 27104

19

I have mailed the questionnaire.

APPENDIX F
DESCRIPTION OF SAMPLE DATA

Description of Sample: Age, Sex, Marital Status

<u>Data</u>	<u>Number of Graduates</u>	<u>% of All Graduates</u>
1. Age		
20-29	3	18
30-39	6	35
40-49	5	29
50 and older	3	18
2. Sex		
Male	0	0
Female	19	100
3. Marital Status		
Married	15	79
Widowed	2	11
Divorced/Separated	1	5
Never Married	1	5

(continued)

Description of Sample: Education Data, Employment Data

<u>Data</u>	<u>Number of Graduates</u>	<u>% of All Graduates</u>
4. Education		
Diploma in Nursing	12	63
Associate Degree in Nursing	5	26
Bachelor's Degree in Nursing	2	11
Year Education Completed		
Before 1965	10	53
1965-1970	3	16
After 1970	6	32
5. Employed since program completion		
Currently employed	19	100

(continued)

Description of Sample: Practice Setting, Employment Data

<u>Data</u>	<u>Number of Graduates</u>	<u>% of All Graduates</u>
6. Practice Setting		
Hospital Out-patient Dept/Clinic	2	11
Physician's Office or Group Practice	1	5
Home Health Agency, Public Health	12	63
College or University Health Service	1	5
Public School	2	11
Planned Parenthood	1	5
7. Length of Employment in Current Position		
1-2 Years	2	11
3 Years	4	21
4 Years	4	21
Over 4 Years	9	47

(continued)

Description of Sample: Employment Data, Salary Range

<u>Data</u>	<u>Number of Graduates</u>	<u>% of All Graduates</u>
8. Total Years Employed in Nursing		
1-5 Years	3	16
6-10 Years	5	26
Over 10 Years	11	58
9. Hours Worked Per Week		
Less Than 40 Hours	1	5
40 Hours	17	90
More Than 40 Hours	1	5
10. Average Monthly Salary		
\$450.00 - \$600.00	1	5
\$600.00 - \$750.00	2	11
\$750.00 - \$900.00	13	68
\$900.00 - \$1050.00	2	11
\$1050.00 - \$1200.00	1	5

(continued)

Description of Sample: Salary Data, Shift Employed

<u>Data</u>	<u>Number of Graduates</u>	<u>% of All Graduates</u>
11. Salary Basis		
Hourly Rate	3	16
Monthly Rate	6	32
Bimonthly Rate	1	5
Annual Rate	9	47
12. Salary Increase Based on Program Completion		
Yes	2	10
No	17	90
13. Shift Employed		
Day	19	100

APPENDIX G
FREQUENCY OF PERFORMANCE OF SPECIFIC EXPANDED ROLE SKILLS
DATA

Frequency of Performance of Specific Expanded Role Skills

<u>Skills</u>	<u>Frequency of Performance</u>			
	<u>Often</u>		<u>Not Often</u>	
	<u>Number of Graduates</u>	<u>% of All Graduates</u>	<u>Number of Graduates</u>	<u>% of All Graduates</u>
14. Take a comprehensive history of a patient with a presenting complaint	12	63	7	37
15. Perform an initial complete physical exam on a non-pregnant patient	5	26	14	77
16. Perform an initial complete physical exam on a pregnant patient . . .	2	11	17	89
17. Perform an initial or follow-up exam on a patient with a presenting complaint . . .	11	58	8	42
18. Perform a pelvic and abdominal exam on a patient . . .	8	42	11	58
19. Collect a Pap Smear	11	58	8	42
20. Perform a breast exam on a patient	9	47	10	53

(continued)

<u>Skills</u>	<u>Frequency of Performance</u>			
	<u>Often</u>		<u>Not Often</u>	
	<u>Number of Graduates</u>	<u>% of All Graduates</u>	<u>Number of Graduates</u>	<u>% of All Graduates</u>
21. Independently diagnose and initiate care for an acute condition according to a protocol	1	5	18	95
22. Prescribe medications for an acute condition according to a protocol	3	16	16	84
23. Conduct appointments with patients	13	72	5	28
24. Initiate adjustments of medications for a chronic condition according to a protocol	5	26	14	74
25. Obtain as part of a history a patient's perception of his problem and how it affects his life	11	58	8	42
26. Assess a patient's health habits	10	53	9	47
27. Teach and counsel a patient concerning family planning .	14	74	5	26

(continued)

<u>Skills</u>	<u>Frequency of Performance</u>			
	<u>Often</u>		<u>Not Often</u>	
	<u>Number of</u> <u>Graduates</u>	<u>% of All</u> <u>Graduates</u>	<u>Number of</u> <u>Graduates</u>	<u>% of All</u> <u>Graduates</u>
28. Counsel a patient about available community resources that might be relevant to his needs . .	15	79	4	21
29. Teach a female patient self-breast examination . .	11	58	8	42

APPENDIX H
OCCURRENCE OF DIFFICULTIES IN SPECIFIC AREAS
OF PRACTICE DATA

Occurrence of Difficulties in Specific Areas of
Practice of All Graduates by Number and Percentage

<u>Area of Difficulty</u>	<u>Frequency of Occurrence</u>			
	<u>Often</u>		<u>Not Often</u>	
	<u>Number of Graduates</u>	<u>% of All Graduates</u>	<u>Number of Graduates</u>	<u>% of All Graduates</u>
30. Patient acceptance of the things you do in his behalf	4	21	15	79
31. Physician acceptance of the things you are trained to do	5	26	14	74
32. Acceptance of the things you do by co-workers	4	21	15	79
33. Applying knowledge and skills you have learned in the nurse practitioner program within the present practice setting	8	42	11	58

APPENDIX I

NEED FOR ADDITIONAL KNOWLEDGE AND SKILLS
IN SPECIFIC AREAS DATA

Need for Additional Knowledge and Skills in
Specific Areas

<u>Specific Areas</u>	<u>Degree of Expressed Need</u>			
	<u>Some</u>		<u>Very Little or None</u>	
	<u>Number of</u> <u>Graduates</u>	<u>% of All</u> <u>Graduates</u>	<u>Number of</u> <u>Graduates</u>	<u>% of All</u> <u>Graduates</u>
34. Obtaining comprehensive histories from patients	12	63	7	37
35. Doing a general physical exam	16	84	3	16
36. Assessing a patient's general health status	14	74	5	26
37. Helping to draw up treatment and management plans for <u>acutely ill</u> patients	17	90	2	10
38. Helping to prepare treatment and management plans for patients who have <u>chronic illnesses</u>	16	84	3	16
39. Evaluating a patient's family, home, and community	11	58	8	42

APPENDIX J

SATISFACTION WITH AMOUNT OF TIME INVOLVED IN
PERFORMING SPECIFIC FUNCTIONS DATA

Satisfaction with Amount of Time Involved in Performing
Specific Functions

<u>Specific Functions</u>	<u>Level of Satisfaction</u>					
	<u>Very</u>		<u>Satis- fying</u>		<u>Not Very</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
41. Conducting appointments with patients	3	16	9	47	7	37
42. Collecting patient histories	6	32	12	63	1	5
43. Performing physical examinations	8	42	7	37	4	21
44. Sharing in arriving at diagnoses	5	28	9	50	4	22
45. Your role in preparing treatment and management plans	4	21	8	42	7	37
46. Giving follow-up care to patients	7	37	7	37	5	26
47. Your role in prescribing medications	3	19	3	19	10	62

APPENDIX K

SATISFACTION WITH VARIOUS ASPECTS OF PRESENT JOB DATA

Satisfaction with Specific Aspects of Present Job

<u>Specific Aspects of Job</u>	<u>Level of Satisfaction</u>					
	<u>Very</u>		<u>Satis- fying</u>		<u>Not Very</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
48. The amount of authority and responsibility which you have	5	26	11	58	3	16
49. The pay you receive	0	0	9	47	10	53
50. All things considered, how satisfied are you with your work?	6	32	9	47	4	21